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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/792,169	03/03/2004	Dana R. Coldren	03-344	3694

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CATERPILLAR c/o LIELL & MCNEIL ATTORNEYS PC
P.O. BOX 2417
511 SOUTH MADISON STREET
BLOOMINGTON, IN 47402-2417

EXAMINER

KIM, CHRISTOPHER S

ART UNIT	PAPER NUMBER
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3752

MAIL DATE	DELIVERY MODE
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01/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/792,169

Applicant(s)

COLDREN ET AL.

Examiner

Christopher S. Kim

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-10, 17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-16, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The response filed November 9, 2007 is acknowledged.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

3. Claims 1-10, 17 and 18 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Invention, Species and/or Subspecies, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on January 3, 2007 and in the reply filed on May 7, 2007.

Claim Objections

4. Claims 11, 14 and 15 are objected to because of the following informalities: in claim 11, line 11, "the spill passage" should read --a spill passage--; in claim 14, line 4, "a second position" should read --the second position--; in claim 15, lines 2-3, "a second position" should read --the second position--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. Claims 11-16, 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites

...closing the single nozzle outlet set at a selected
timing after the opening step:
the closing step for a first injection event including...;
the closing step for a second injection event
including...;
the closing step for a third injection event including...

The intent of the colon is unclear. It is uncertain whether all of the closing steps for the first, second and third injection events are required by the claim.

Claim 11 recites the limitation "the closing step for a first injection event" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "the closing step for a second injection event" in line 12. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "the closing step for a third injection event" in line 17. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "the closing step for a first injection event... the closing step for a second injection event... the closing step for a third injection event" in lines 9-17. At least one injection event appears to be a double inclusion of the "opening a single nozzle outlet set of the fuel injector" in line 5.

Claim 15 recites the limitation "the closing step" in line 4. It is uncertain whether it is in reference to the closing step of the first, second or third injection event.

Double Patenting

6. Claims 11-16, 19 and 20 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 8-13 of U.S. Patent No.

7,111,613. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the '613 patent discloses the claimed invention.

7. Claims 11-16, 19 and 20 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 9-19 of U.S. Patent No.

7,134,616. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the '616 patent discloses the claimed invention.

Response to Arguments

8. Applicant's arguments filed November 9, 2007 have been fully considered but they are not persuasive.

Applicant argues that the nonstatutory obvious type double patenting rejection should be withdrawn because it would be impossible for the present application to unjustly extend any patent term of the later filed U.S. Patent No. 7,111,613. Applicant's argument is not proper grounds to traverse a nonstatutory obvious type double patenting rejection.

Applicant argues that U.S. Patent No. 7,111,613 fails to disclose equalizing hydraulic pressure. Equalization of hydraulic pressure is inherent during the closing step of '613 Patent. Same response applies to applicant's argument to U.S. Patent No. 7,134,616.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

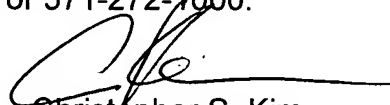
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (571) 272-4905. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Christopher S. Kim
Primary Examiner
Art Unit 3752

CK